

REMARKS

Claims 1-7, 10 and 11 are pending.

Response to Claim Rejections Under §§ 102/103

Claims 1-7 and 10-11 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 6,197,870 to Sakakibara. Applicants respectfully traverse.

The present claims are directed to a rubber composition for a tire tread comprising 10-250 parts by weight of a carbon black per 100 parts by weight of a rubber component, wherein the carbon black has a hydrogen desorption ratio $> 0.260-6.25 \times 10^{-4} \times \text{CTAB}$ (wt%), a toluene tinting permeability of not less than 90% and a cetyltrimethylammonium bromide adsorption specific surface area (CTAB) of 111-200 m²/g.

As shown in the attached Supplemental Rule 132 Declaration by Mr. Yanagioka, the carbon blacks in Examples 4-7 of Sakakibara do not satisfy either of (1) a hydrogen desorption ratio $> 0.260-6.25 \times 10^{-4} \times \text{CTAB}$ (wt%), or (2) a toluene tinting permeability of not less than 90%. Thus, Sakakibara fails to disclose or suggest the carbon black used in the present invention.

In addition, Sakakibara fails to disclose or suggest the hydrogen desorption ratio and the toluene tinting permeability of the carbon black. Furthermore, there is no motivation in Sakakibara for defining that a hydrogen desorption ratio of the carbon black is more than $0.260 - 6.25 \times 10^{-4} \times \text{CTAB}$ (wt%) and a toluene tinting permeability of the carbon black is not less than 90%.

The Examiner asserts, at page 5 of the Office Action, that Example 5 of Sakakibara is directed to a carbon black having a toluene tinting permeability within the presently claimed

range and a “hydrogen desorption ratio, being only 0.02% off from the claimed value,” and as such “one skilled in the art would expect [the rubber compositions] to have the same properties.” However, as further demonstrated by Mr. Yanagioka’s Supplemental Declaration, the carbon black prepared according to Example 5 of Sakakibara, which has a toluene tinting permeability of 98% and a hydrogen desorption ratio of 0.16%, results in a tire having an inferior wear resistance index (i.e., 90) when used in the tread portion of tire, as compared to, for example, working Example 1, which has a wear resistance index of 112. Thus, the rubber compositions do not have the same properties as the Examiner asserts.

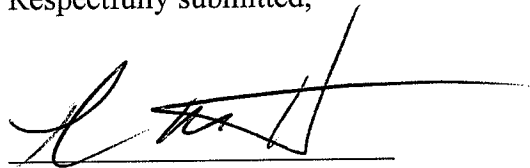
Moreover, Comparative Examples 1-3 and 6-7 of the present specification, use carbon black having a toluene tinting permeability of more than 90% and a hydrogen desorption ratio close to the present claimed relationship (i.e., a hydrogen desorption ratio being close to $0.260-6.25 \times 10^{-4} \times \text{CTAB (wt\%)}$). However, as shown in Table 6 of the present specification, Comparative Examples 1-3 and 6-7 exhibit inferior wear resistance and/or low heat buildup as compared to the working Examples of the present invention. Thus, rubber compositions using the carbon blacks that do not satisfy either of (1) a hydrogen desorption ratio $> 0.260-6.25 \times 10^{-4} \times \text{CTAB (wt\%)}$ or (2) a toluene tinting permeability of not less than 90%, do not simultaneously establish the high wear resistance and the low heat buildup.

Sakakibara does not disclose or suggest the effects of the hydrogen desorption ratio and the toluene tinting permeability of carbon black on wear resistance and low heat buildup. Thus, one skilled in the art would not expect the results obtained according to the present invention. Accordingly, Sakakibara fails to anticipate or render obvious the present claims. Withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Thomas M. Hunter', is written over a horizontal line.

Thomas M. Hunter
Registration No. 64,676

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: March 30, 2010